THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XLV. WEDNESDAY, JANUARY 14, 1852. No. 24.

SOME REMARKS ON THE RECENT DISCOVERY, THAT THE CHIEF MOTIVE POWER OF THE BLOOD IS IN THE LUNGS AND NOT IN THE HEART, AND ITS APPLICATION TO USEFUL PURPOSES.

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[Communicated for the Boston Medical and Surgical Journal.]

I HAVE elsewhere detailed the experiments proving, by ocular demonstration, in the vivisection of alligators, made in this city, that the chief motive power of the blood is in the lungs, and not in the heart. Animation was restored by artificial respiration, after the animal experimented on had been perfectly dead to all appearances for about an hour. Organic as well as animal life had been destroyed by tying the trachea. It is a remarkable fact that tying the trachea is the only means by which that animal can be expeditiously killed. They will live for days after decapitation, or immersed in water, but speedily die when the trachea is tied. After life had been, to all appearances, completely extinguished, the heart, lungs and abdominal viscera were exposed to view by a careful dissection. The inflating process was then commenced. The blood, at length, was seen to move from the vessels of the lungs to the quiescent heart—thus proving that the primum mobile and chief motive power of the blood are in the lungs and not in the heart. Dr. Dowler, who performed the vivisection, supposed that atmospheric air imparted to the globules of the blood a self-locomotory. According, however, to the theory of Mrs. Willard, of Troy, to test which some of the experiments were made, it is the caloric evolved in the transformation of venous into arterial blood that gives the motion. Be this as it may, the important discovery, that the primum mobile of the blood and its chief motive power are in the lungs, rests not on theory, but on ocular demonstration, repeated again and again. Mr. Crawford, long ago, attempted to explain the phenomena of animal heat by supposing that the caloric, generated in the lungs by respiration, was conveyed through the arterial system in a latent state to all parts of the body, and was there given out in the form of sensible heat. The foundation of this theory was the greater capacity of arterial than venous blood, for caloric. His premises were denied by Davy and the most of his co-temporaries—but subsequent observations have proved them to be correct in the main. Mrs. Willard's theory of the motive powers of

the blood rests upon the same basis as that of Mr. Crawford's doctrine of calorification—the different capacity of arterial and venous blood for caloric. The theory itself is not the subject under consideration, but only its main proposition, that the chief motive power of the blood is in the lungs, and not in the heart. Whatever be thought of the theory itself, it has the high merit of having announced a most important truth, which is proved by ocular demonstration, and will stand as an important discovery, whether the reasoning that led to it be correct or not.

I propose to make some remarks on the application of this important American discovery to useful and practical purposes. Lord Bacon truly says: "For of all the signs of philosophies none are more certain and noble than those taken from their fruits. For fruits and the discoveries of works are as the vouchers and securities of the truth of philosophies." "As it is in religion that faith be manifested by works, philosophy should be judged by its fruits, and held as vain if it prove barren."—(*Nov. Org., Sect.* iv. 73.) The discovery that the chief motive power of the blood is in the lungs, and not in the heart as Harvey supposed, I propose to show will not prove barren, but rich in useful fruits—"the vouchers and securities for its truth." Lest, however, some errors which have crept into physiology, may prevent any portion of those physicians, who are not too old or full of prejudice to receive a new idea conflicting with their former opinions, from seeing and believing in the discovery, it may not be amiss to surround it with some of the highest authorities in medicine, each holding a light so closely to it, as to convince the sceptical that it rests on the rock of the latest revealed truths in science, and not, as they might gratuitously suppose, on idle speculations behind the times.

Among the authorities, Sir Benjamin Brodie stands foremost and closest, he having, many years ago, come very near stumbling on the discovery. He killed a cat, i. e. paralyzed the action of the heart and lungs, with the poison called *woorara*, and then by dint of artificial respiration, kept up for two hours and a half, brought the animal to life. He saw so far into the mystery of the motive power of the blood, as to ascertain that the heart's action depended upon the action of the lungs; and hence the experiment with the cat was to see whether life might not be preserved by artificial respiration until the effect of the poison on the nervous system had time to wear away. Sir Benjamin's idea was good, and true as far as it went, but it did not reach the main truth of the discovery first announced in Troy, and subsequently demonstrated in New Orleans. Although he brought the cat to life, he had no suspicion that the chief motive power of the blood was in the lungs, and that the heart performed a subordinate part in giving it momentum. His experiment, however, went far enough to prove, that Bichat and some other physiologists, in supposing that the blood continued, for a time, to circulate through the lungs by the action of the heart after respiration ceased, only becoming unaërated after the lungs ceased to act, fell into a great error, which for many years misled investigation from the true path of inquiry.

Dr. Kay, however, deserves much credit for correcting the error,

which he has done by proving, that as soon as respiration stops, the blood begins to stagnate in the pulmonary capillaries, because it ceases to be transformed from venous to arterial. In the language of the new philosophy, because its motive power is taken away by the cessation of the process of arterialization, therefore it stagnates. Dr. Kay ascertained the fact, but he could not divine the cause. His researches do not go far enough to detract from the merits of the discovery, but they furnish sufficient light to show that it rests upon scientific truth.

Baron Cuvier, the highest authority in natural philosophy, brings the light of that science in support of the new doctrine, that the chief motive power of the blood is in the respiratory organs. His great work, called "Animal Kingdom," revised by Latreille, article Reptilia, says—"The blood derives its heat and the fibre its susceptibility of nervous irritation from respiration." Not only that, but his other great work—"Lecons d'Anatomie comparée," abounds with proof of the intimate relation of muscular motion and nervous influences, with respiration as their source and spring. Speaking of animals, he says, "Chacune de ses classes jouit de la faculté de se mouvoir précisément dans le degré qui correspond à la quantité de la respiration."—(*Vol. I.* p. 52.) The blood could not derive heat from respiration without deriving more or less power of motion; because caloric is not inoperative. Those who object to the truths of natural philosophy as authority in medicine, forget that the former is the root of the latter. Hence objections, drawn from medical theories, should have no weight when brought against the truths of the mother science.

Harvey discovered the course of the circulation of the blood, but he did not discover the chief power that moved it. His discovery was incomplete, as it erroneously placed it in the heart instead of the lungs. In consequence of this radical error, the science of medicine has not been as much enriched by the discovery of the circulation as was anticipated, as it only served to lead the blind into a dazzling and uncertain light—whereas the discovery that the chief motive power of the blood is located in the lungs, and not in the heart as was erroneously supposed, has opened a rich field for improvement in physiology, pathology, and in the more successful methods of treatment in disease. Before Dr. Bassi, charged, by the scientific congress lately held at Genoa, to explain the reason why silk worms fed on indigo leaves have a blue color imparted to the membranes between the parietes of the air-tubes, can give a satisfactory explanation of that phenomenon; and before Prof. Bryan, of Philadelphia, can interpret the experiments he is now making on papilios, they will have to look into the anatomy and physiology of those insects, brought into the light furnished by the discovery locating the motive power of the blood in the lungs. The dorsal vessel, called the heart, according to Cuvier, has no muscularity, although these insects have upwards of four thousand muscles. M. Lyonet counted in the caterpillar, called the cassus lignéperda, 4041 distinct muscles. The heart has but one artery, and that artery no branches. The muscles have no bloodvessels distributed to them, nor is there any cellular membrane between the layers of their fasciculi, being parallel and without

attachment except at their origin and insertion—resembling hairs tied at their two ends. There are no veins, but more nerves than in the human body, viz., 47 pair in the papilios. Every part of the insect is pervaded by tracheal branches penetrating to the extremities of every appendage of the body; yet in the interstices between the tracheal vessels the nutritive juices, which the experimenters found colored in those worms fed on indigo leaves, are carried by some unknown agency to all parts of the body—no doubt by the same spring or locomotive power which in man is the primum mobile of the blood.

But it is not so much in explaining mysteries in entomology that the discovery is valuable, but in leading the way to important improvements in therapeutics and other practical and useful sciences. Thus before roses can be planted on the pallid cheek, it is important to know in what way healthy red blood can be soonest made, warmed, depurated and kept in motion. Before the "young idea can be taught to shoot" *with vigor*, it is all-important that a current of red healthy blood be distributed to the brain—the organ of thought. The same important agent, red healthy blood, is absolutely necessary to give tone, vigor and symmetry to the body, and to prevent it from falling an untimely prey to consumption and other ills. But it is not so generally known, that red healthy blood is just as necessary for the full development and integrity of the moral faculties as the intellectual; and under this aspect, the discovery of its motive powers has strong claims to the attention of theologians. Church history bears witness, that "*the stony ground*" where the seed of christian truth takes no deep root, is the very ground trod by a people whose blood is vitiated by idleness, filth, impure air and unwholesome diet. Instance, the indolent Hindoos and other inhabitants of populous Asia, breathing the impure air of crowded hovels without sufficient food or clothing. Instance, the idle eaters of ant eggs and caterpillars, overspreading Africa, and the denizens of the cellars of London. Education, therefore, in its broadest sense, physical, moral, religious and intellectual, is essentially and indissolubly connected with red healthy blood. Hence, when Mrs. Willard indicated one of the chief ways, by which red healthy blood could be made at will, and that every child could be taught to make it for itself, she was not, as it was supposed, out of her province, as the head of a renowned institution of learning, but standing on the broad platform of her profession, and directing the building of a permanent basis for it to rest upon throughout all time. In forming that basis, she naturally looked into the science of physiology for certain materials in regard to the motive powers of the blood; and not finding them there, after going as far as Harvey went, she brought that science back to natural philosophy, the parent from which it sprung, which receiving new strength and increase therefrom, readily conducted her to the hiding place of the materials she was seeking—a golden fleece, more valuable than that of fable. If some medical men gainsayed her for overturning things on the altar of Harvey, it was because they had not reflected that the empire of science, so long encroached on by empiricism, calls for enlargement, and that America, like Rome, needs a Minerva. Surely the almshouse, the hospital and the sick room, is too

small an empire for the numerous votaries of the comprehensive science of medicine—a science, like the Crystal Palace, embracing almost everything worthy to behold in its study, but narrowed down in its practical exercise to a few common-place duties, associating it in the public mind with nothing but nauseous drugs, making it the terror of the people, and in too many instances driving them from its advantages until the fear of death is upon them. So much knowledge, with a field too small to call a tithe of it into requisition, requires the extension of the practical sphere of its operations, and that sphere will need enlargement until it embraces in its practical boundaries, not only therapeutics, hygiene, &c., but the art, long sought after by the ancients, of making the old younger, children healthy, men vigorous, and women pretty. This art has always been imperfect; its basis or starting point—a knowledge of the motive powers of the blood and the ways and means of making red healthy blood at will—having been unknown. While the erroneous hypothesis of Harvey prevailed, that the heart, whose action is not under the will, was the primum mobile and chief motive power of the circulating fluids, instead of the lungs, which are under the will, there was no known way, except through the slow and uncertain process of diet, change of climate, exercise, or a course of medicine, by which the vitiated, cold, impoverished circulating fluids could be reached, depurated, or rendered red, warm and healthy. Body, mind and morals had to suffer all the effects of deteriorated humors as a necessary evil—the direct road to purify the blood through the respiratory organs being unknown, from incorrect theories of the power that moved it and the location of that power.

The true doctrine on this subject was no sooner promulgated, than I reduced it to practice, and have made it tell well as a valuable adjuvant in the treatment of many diseases, particularly those of a chronic kind, and the cold, phlegmatic ailments so common among females in hot climates. Some complaints, especially acute inflammations, require repose of the respiratory organs, absolute rest and a spare diet; while the great mass of chronic and congestive disorders are greatly benefited by their activity. Thus in pleurisy, the curative process of nature prevents full respiration by piercing the side with pain whenever the ribs are expanded; because the motive power of the blood being in the lungs, ful breathing would aggravate a complaint consisting in too much heat and momentum. On the other hand, the cold, congestive and torpid affections require increased activity of the lungs to heat, redden, and vivify the circulating fluids. Full breathing in the open air and sun light is beneficial to children of infirm constitutions, and applicable to most of the diseases and infirmities peculiar to females, greatly assisting other necessary remedies, as malaxation, friction, inunction, bathing, &c., to improve the complexion, to prevent the hair from falling out, and the teeth from decay.

There has been a fearful increase of consumption and female complaints, and a large field opened for dentists, since the old-fashioned spinning wheel, called the big wheel, has been laid aside. In ancient times the women ground at the mill—that is, turned a horizontal stone with

an upright staff for a handle, requiring them to stand up and to use both hands. Two women grinding at the mill, standing opposite to each other, was one of the best species of exercise to expand the lungs and to depurate the blood, without giving coarseness to the muscular system, and no doubt greatly contributed to the health, grace and classic beauty for which the ancient women were so renowned. The discovery of the motive power of the blood, and the location of that power, will be a good antidote against the follies of Bloomerism, enticing women to assume indiscriminately the avocations of men. Most of these avocations would make them coarse, rough and masculine in appearance, like the weather-beaten female peasantry of Europe. The discovery is valuable as a key to find those species of exercise, which do not give coarseness, deformity and masculineness to the general muscular system and its tegumentary covering, but softness, symmetry, agility and grace, united with health, as the wheel and the mill-stone formerly gave. A substitute for the last-mentioned exercises is yet a desideratum. Mrs. Willard's substitute of early rising and running backward and forward before an open window, moving the arms and expanding the chest, is a very good one, but is defective in not being associated with some visible object of utility, and consequently somewhat difficult in being generally practised to a sufficient extent. The inventor of some species of play or kind of work, requiring similar movements, would be entitled to the thanks of the community. It could be improved by being performed in the morning sunshine, as sunlight is particularly beneficial to youth in strengthening their constitutions.

It was a rule in Egypt to bestow divinity and consecration upon the inventor of any useful remedy or thing; and as instinct oftener than reason led to discoveries, the Egyptian deities were mostly in the form of reptiles and other animals of the brute creation. But if America, like Egypt, Greece and Rome, is to have mythological divinities, I am sure that none will object to their coming in the form and likeness of woman. Hence I have no apology to make to the profession, of which I am a humble member, for giving in my adhesion to an important practical truth in science, first announced by an American lady, long famous for her erudition and intelligence, and for the number of our country's fair daughters who have been refined and polished by her hands.

New Orleans, Dec. 23d, 1851.

DENTAL AMALGAMS.

To the Editor of the Boston Medical and Surgical Journal.

Sir,—In your Journal of the 31st ultimo you state, page 458, in a paragraph with the above caption, that "there is an admirable paper on the character of amalgams for filling teeth, which at some periods have been exceedingly popular." You continue—"It is clearly shown that nothing can be relied on for this purpose but gold," and you wind up your paragraph in this *thoughtless* statement—"But quackery of every species thrives, and it would seem as though pseudo-dentists were some-

times patronized, because there is a pleasure in being cheated out of one's teeth."

I do not remember, Sir, in all my life, that I ever read an article that sent its iron into my soul as did the above unjust remarks, upon an *ex parte* statement, which you convey to your readers in the above-named paragraph. As a contributor to your periodical for several years past, you are aware that I am a dental practitioner—I would state of twenty-two years' standing, and I am the third oldest dentist in the city of New York. I studied medicine four years in the office of the distinguished surgeon, Dr. J. C. Cheesman, of this city, and graduated in 1836 from the most eminent college of which the United States could boast—the College of Physicians and Surgeons of the University of the State of New York. I have been Surgeon to a military hospital, and Assistant to the New York City Hospital. I would ask, what physicians have had such advantages as these but the favored few? And I would ask, where is there *one* dentist in the United States who has received a moiety or a tithe of such opportunities? In addition I served an articled apprenticeship of seven years to the proudest name of English dentistry in London. I do not mention these *to puff myself*, but merely to state that I have used "dental amalgams" upwards of twenty-two years. Yet, I am no "*quack*," nor have I ever been guilty of catering to people's "pleasure" (!) in "being cheated out of their teeth." *I am no cheat*, nor am I a pseudo-dentist. I have these dental amalgams in my own teeth, in my wife's teeth, in my children's teeth, in the teeth of my friends, relatives and patients. Yet I am no "cheat," "quack," or "pseudo-dentist." I deny—emphatically deny that gold is the best material in all cases for filling and preserving the teeth. I will demonstrate, by practical illustrations, in my papers (only waiting the completion of wood-cut illustrations) on dento-neuralgic affections, prepared for your Journal—that gold, in very many cases, is the very *worst!* material for preserving the teeth.

With your permission, and which I ask in justice to myself and a very large majority of my professional brethren who use dental amalgams, I will now furnish you with the history of dental amalgams for publication. Just about the commencement of the revolution for Mexican Independence, my uncle returned to England from Mexico *via* France. He had been engaged in Mexico as superintendent of some silver mines. He found it to be a common practice amongst the workmen to put the amalgam paste into their hollow teeth, "to prevent their aching when eating." They found that it preserved the teeth also. In France he mentioned this circumstance to a dentist he employed about his mouth. The French dentist quietly took the hint, and made an immense fortune before the secret was discovered by his competitors. My father first used it in England, and he introduced it first into the United States in 1827. The New York dental profession believing "the important discovery" to be a humbug, and nothing more than the ordinary "*fusible metal*" (tin, lead and bismuth), took no particular notice of the "paste," until the Messrs. Crawcours arrived in this city. These men made a feature "a la Barnum" of the material, and for a time they

actually absorbed all the dental business of the city, and accumulated $60,000 ! in twelve weeks. Our pockets were touched by these men (whatever their *character* may have been is not the point in question) *hinc illæ lachrymæ*. Some six dentists formed themselves into a *club*, then procured a friend to visit the Crawcours to have his teeth filled, for which the dentists paid. They then employed our eminent chemist, Chilton, who removed the fillings, and analyzed them, and discovered that quicksilver was a component part. They at once, *mirabile dictu*, discovered the quackery ! which they immediately published to the world. Everybody was frightened, everybody was salivated, everybody was poisoned. Yet no one ever discovered any bad effects from the amalgam used by my father and myself for ten years previous, which was supposed to be only "fusible metal." The Messrs. Crawcours fled, not for "succedaneum," but for "safety." The dental *club* now formed themselves into "The American Society of Dental Surgeons." Annual committees *were appointed to condemn* the use of dental amalgams. They annually reported them to be not only useless, but injurious to the teeth and the constitution. But as year after year rolled away, so these *committee men* one by one fell away too, recreant to their association. They had severally become converts to the simple truth. They had found that amalgams were innocent in their properties and excellent for their purposes in their proper places. As honest men, they at once repudiated ignorance and blind prejudice. Nay, more—they endeavored to reclaim, to enlighten their stultified brethren. Such were the eminent names, who were committee men, as Baller, Allen, Lovejoy, Clarke, &c. &c. Are these gentlemen liars, "cheats," "quacks," and "pseudo-dentists"? Will the Baltimore Dental Times say so? He will cry out, *tempora mutantur, et nos mutamur in illis*. I have another proof what "cheats" and "pseudo-dentists" we are, in the following case. I filled with amalgam several *molar* teeth for my sister-in-law (a resident of Detroit). Two years after, she consulted Dr. Ware, then practising dentistry in Detroit, regarding her *front* teeth. Dr. Ware stood aghast when he saw amalgam fillings in her mouth. "Who has done this"? he exclaimed; "your teeth are ruined, your constitution is destroyed, you have in your teeth a deadly poison!" When I was named as the delinquent, as you designate us, Sir, I was a "cheat" (by the by, I did not get anything for them), a "pseudo-dentist," &c. My relative thought I had grievously imposed upon her. This same Dr. Ware, a few months after, in New York, *challenges* his "*friend*" Dr. Parmly to a public controversy *that he will prove amalgams* to be the very *desideratum* of the dentists' wishes—the most innoxious and most excellent for filling teeth, which he had a year or two before pronounced as being a deadly poison. Dr. Ware is an educated, talented man, and found, like Othello's friend, that "to put money in the purse" was not to be done by ignorance. He now recommends *his* amalgams as the *ne plus ultra* of materials. So much for another convert to truth.

Monsieur Mallan next arrived on these shores with his amalgam, and carried everything (for a time) before him. The association of dentists

killed him. Then came the climax of all the dental amalgam revivals, in the statement made by Dr. Parmly (who has always been opposed to these materials), that a gentleman had died in consequence of swallowing a filling in the night time, after two years' illness, which the gentleman knew all the time to be the cause of his illness, yet never had the filling or the tooth during all this time removed from his jaw. Dr. Parmly also stated that the said filling was removed by Brewster, at Paris, and the tooth refilled with gold. Letting this inconsistency pass, I at once, without knowing anything of Dr. Parmly's published case, denied its truth, and felt warranted in doing so, from long, very long experience in the use and abuse of amalgam fillings, and from the simple fact that my mother had been in the habit of taking one ounce of fluid quicksilver twice a week for several years for her asthma, which she conceived relieved her. She was never injured in any way, more than if it had been the same quantity of water. Dr. Caldwell's case also spoke against such an accident—a gentleman, he states, swallowed *eighteen ounces of tin amalgam* to destroy a tape-worm, and the mass never passed him, but remained in his bowels years, without any constitutional injury being inflicted even by its mechanical presence. I emphatically and pointedly defied Dr. Parmly to prove the truth of his statement. *He could not do so.* But it was proved by Dr. Houston, late of the Herald, that the gentleman in question died from a complication of disorders. My professional brethren, seeing that Dr. Parmly's ground was untenable, renewed their courage, which had oozed from their fingers' ends; they rallied, came to the charge with steel-pointed pens, and annoyed him in every way they could, and to this day is a desultory warfare kept up in the pages of the Dental Recorder, of this city, between Dr. Parmly and its editor on the merits of the controversy, and recriminations upon each other.

You will now, perhaps, admit that you have been too hasty in your remarks, and that you have arrived at conclusions too soon. I will add that all the anti-amalgamists (very few, to be sure) notwithstanding that they have been on the *qui vive* for fifteen years, have not yet been able to produce *one isolated authenticated case* of salivation or injury done to the *alveoli* or maxillary bones. Physicians have never implicated these fillings in their diagnostic marks of disease. *Homœopathists* have been silent on the subject. The only cases brought in proof are those teeth which should not have been filled with any material, gold or otherwise, under any circumstances. The teeth have been either dead or diseased, and should have been removed from the jaws. The anxiety, however, sometimes both of patient and dentist, leads them to hope for success in saving these teeth, and it is these cases which some dentists would seize hold of, as proofs of their own unprofessional dogmas. Where one ounce of amalgam filling was used fifteen years since, twenty pounds are used now. I refer for this fact to Messrs. Jones & White's dental depot in this city, and their branch establishments in Philadelphia and Boston.

In my chapters on dento-neuralgic affections I will prove, beyond all cavil and doubt, practically, that gold! *pure* gold! in some mouths

is injurious to the teeth, and sometimes to the health of the patient. I will practically demonstrate that *tin* foil is infinitely and immeasurably *superior* to gold for preserving a certain class of teeth, not only from pain, not only from decay, but from absolute death and absorption, the same as is found to act upon the roots of the deciduous teeth in children. I do not pretend to be a teacher—but I am well advised in making the assertion that the dental profession can yet absorb a small quantity of dento-physiological *pabulum*.

I here challenge the Baltimore Dental Times, the Baltimore College of Dentistry, all the anti-amalgamists to be found here and in Europe, to produce one single case where any kind of amalgam filling has produced a diseased alveolus, or has ever reached injuriously the maxillary bone. And I further challenge them to prove one case where amalgam has irritated a tooth, unless by mechanical pressure from close approximation and pressure on a living nerve, and in other cases where the tooth has been injured by the application of *arsenic* alone to destroy the vitality of the nerve, which has destroyed the life of the tooth.

Very respectfully, A. C. Castle, M.D.

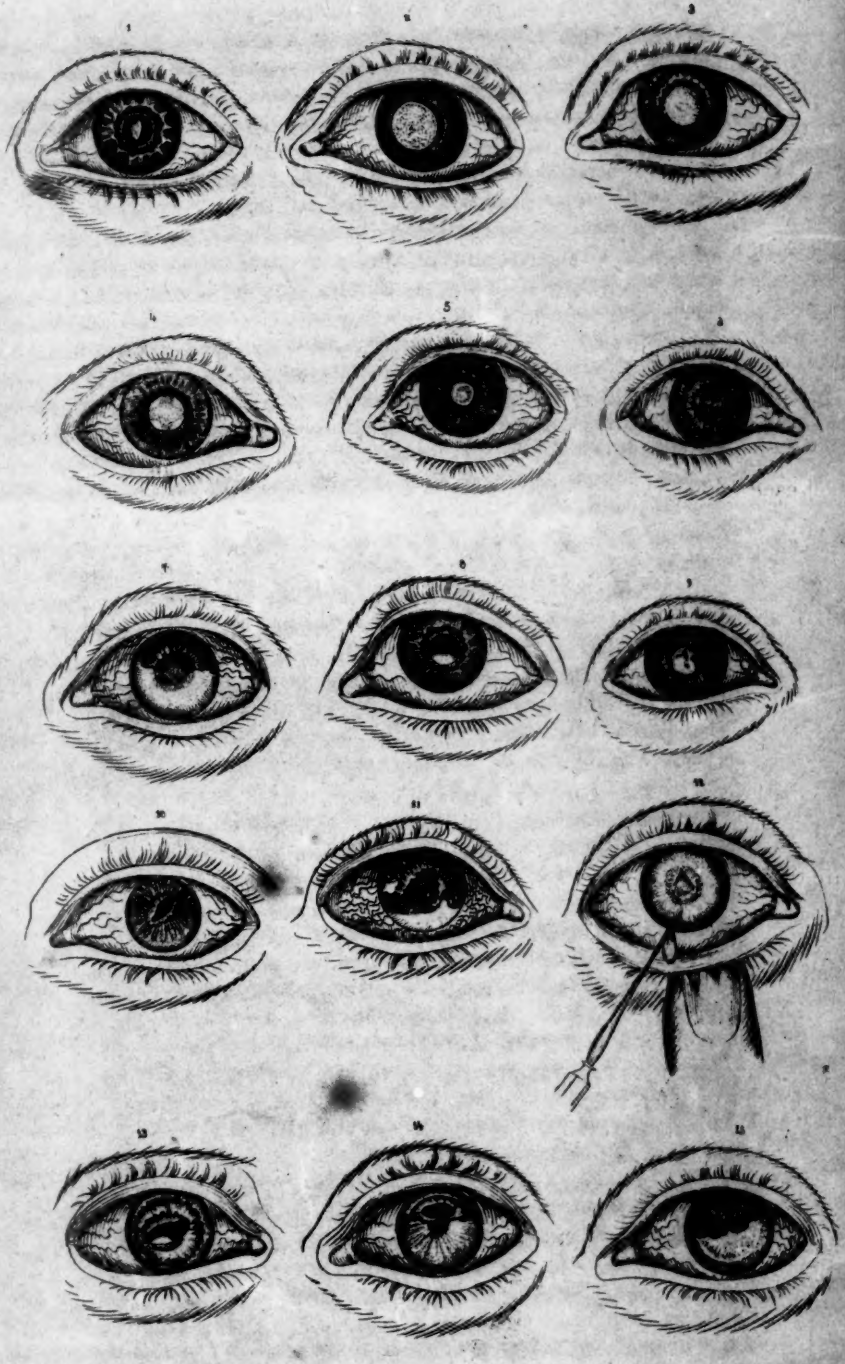
New York, Jan. 2, 1852.

ORIGIN OF ANIMAL HEAT.

[Communicated for the Boston Medical and Surgical Journal.]

Though many theories of the origin of animal heat, have been brought to the notice of medical men, still no conclusion has been reached that has in any degree satisfied the physiological scholar. By many it is attributed to the quality of the food used, and the action of oxygen on the blood through the medium of the lungs; but such declarations have little weight in satisfying the inquirer.

The powerful agent by which a uniformity of temperature is maintained in the blood of man, cannot depend on the quality of meats or drinks, but on a law as unchanging as that which regulates and maintains the movements of all the planetary worlds. In man, in health, the temperature is invariably kept at ninety-eight degrees; while in the feathered tribes, it is much higher, but still uniformly the same at all seasons and in all countries. In cold-blooded animals, the temperature corresponds to that of the elements in which they move or exist, both having the same origin. Birds of the smallest size, which sometimes fill the air with their musical notes when mercury is twenty or thirty degrees below zero, whose bodies weigh perhaps but a single ounce, and clothed only with one or two drachms of feathers, must depend on some other cause than the quality of their food to maintain an uniform temperature sufficient to sustain life. The same laws which support vital heat in one kind of animal, are in full force throughout the whole animate creation. When life ceases, decay begins; a new train of phenomena is developed from chemical action, which continue until the body is reduced to its ultimate elements. There is a tendency in caloric to diffuse itself equally in all bodies placed in the same temperature.



Electro-magnetism acts with undeviating certainty. There is surely inductive evidence that the ultimate atoms of all matter are possessed of negative and positive poles, by which means similar elements unite in specific forms, constituting bodies of more or less density, according to the form of the ultimate element. The ultimate atom of each and every element must differ much in form, if not in density, to afford such a striking difference in their specific gravity. I am ready to believe that every kind of matter, reduced to its ultimate atom, no longer to be divided, has the same specific gravity, and is capable of rising to the remotest bounds of the atmosphere; and that an elementary atom of platina, gold, lead, iron, and hydrogen and oxygen, is of the same specific gravity, their forms only affording different degrees of density in a state of combination.

Crystallization is the result of magnetic power; and the density and specific gravity of each kind of crystal differ as the forms of their ultimate atoms differ. If each atom of matter through its entire substance were in the same state of electricity, negative or positive, they would repel each other, and no compound could be formed. No other agent possesses like power, being the only one in the hand of the Almighty to move, control and regulate the motions of the whole planetary worlds. The hardest substances are liquified by this all-pervading fluid. We have good and ample evidence that much of the interior of the earth is in a state of fusion by this unchanging agent. The heat within the earth at a given distance from the surface is uniform, in all latitudes and at all seasons of the year, by this agent, controlled by the same law which moves and governs the whole universe, without alteration or amendment.

DANIEL MOWE.

Lowell, December, 1851.

DISEASES OF THE EYE.

[THE following is an explanation of the Plate which accompanies the present number of the Journal. It may be considered as a specimen of the illustrations of the new work on surgery by Dr. Piper, now in press, and alluded to in last week's Journal.]

Fig. 1. Central cataract, from Demours.
Fig. 2. Capsulo-lenticular cataract, from Demours.
Fig. 3. Complete lenticular cataract, from Demours.
Fig. 4. Capsulo-lenticular cataract in a man aged 62 years.
Fig. 5. Capsulo-lenticular cataract in a man aged 83 years.
Fig. 6. Black cataract (case analogous to Weller, pl. 2, fig. 2).
Fig. 7. Hypopion (oculus purulentus).
Fig. 8. Opacity of the crystalline lens which has spontaneously burst its adhesions and fallen nearly behind the iris, from Demours.
Fig. 9. Capsulo-lenticular cataract in an infant.
Fig. 10. Oval pupil caused by iritis following a blow.
Fig. 11. Hypopion following iritis. Two little abscesses are seen formed in the thickened iris. The pupil is deformed and nearly obliterated.

Fig. 12. Puncture of the anterior chamber of the eye.
Fig. 13. Artificial pupil, from Blasius.
Figs. 14 and 15. Artificial pupils, from Demours.

REPORT OF A JOINT COMMITTEE OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY AND THE PHILADELPHIA COLLEGE OF PHARMACY, RELATIVE TO PHYSICIANS' PRESCRIPTIONS.

THE joint Committees of the Philadelphia County Medical Society, and of the Philadelphia College of Pharmacy, appointed for the purpose of considering the means best adapted to prevent the occurrence of mistakes in the compounding of the prescriptions of physicians by apothecaries, beg leave to report that they have given to the subject all the attention that its importance demands, and present the following hints as the results of their joint deliberations. They have taken the liberty of adding, also, a few general hints on the relations that should exist between physicians and pharmaceutists.

A. *In Respect to Physicians.*

1. Physicians should write their prescriptions carefully and legibly, making use of good paper, and, whenever possible, of pen and ink. When obliged to write with a pencil, they should take the precaution to fold the prescription twice, so as to prevent its being defaced.

2. The nomenclature of the United States Pharmacopœia is becoming annually more in favor with pharmaceutists; a statement attested by the fact that 1500 copies of the book of Latin Labels for shop furniture, published by the Philadelphia College of Pharmacy, have been disposed of within three years. Physicians are also becoming more alive to the merits of our national Codex, and they are respectfully urged to familiarize themselves with its nomenclature, and to adhere to it strictly in their prescriptions.

3. The numerous treatises on materia medica, pharmacy and the practice of medicine, of English origin, that are printed in this country, notwithstanding that they are generally interlarded with the formulæ of our own Pharmacopœia, tend, nevertheless, very much to confuse the physician and apothecary, in the use and exact meaning of terms in prescriptions. To obviate the difficulties thus occasioned, the physician should, when he prescribes a medicine, which is not officinal, nor in common use, state on his prescription, either in a note at the bottom, or within parenthesis, following the article, the authority or work from whence it is derived, as "Griffith's Formulary"—"Ellis's Formulary"—"Braithwaite's Retrospect," &c.

4. Physicians would lessen the risk of errors in their prescriptions, and increase the chances of their detection should they be made, by observing the following hints.

1st. Write the name of the patient at the top of the prescription, unless a good reason prevents this being done; in which case, it should be

expressed as for Mr. G—, Mrs. R—, or Mrs. S.'s child, or for Master T—, so as to convey to the apothecary some idea of the age of the patient.

2d. The date, and name of the physician or his initials, should always be appended, and, whenever practicable, the dose and mode of administering the medicine directed.

3d. When an unusually large dose of an active medicine is prescribed, as opium, morphia, elaterium, strychnia, &c., let such names be put in *italics*, and the quantity or quantities repeated in writing enclosed within a parenthesis; thus :—R. Morphiæ sulphatis, grs. vj. (six grains). Div. in chart. vj.

4th. When an active substance is to be used externally, it should be so stated on the prescription; thus, "For external application"—"To be applied to the part as directed," &c.

5th. The quantities of each article should be placed in a line with the name, and not below it, and in using the Roman numerals, the *i*'s should be dotted correctly.

6th. The occasional practice of writing the directions intended for the patient in Latin, and especially in abbreviated Latin, is uncalled for, and attended with some risk; it is far safer to write them in English, and without abbreviations or the use of figures, unless these are well and distinctly formed.

B. *In Respect to the Apothecary.*

1st. The apothecary should hesitate to dispense a prescription, the handwriting of which is so imperfect as to render the writer's meaning doubtful—especially if it involves agents of a poisonous or irritating character—unless he is able, from collateral circumstances, to satisfy himself of the intent of the prescriber. In such a case he should delay the delivery of the medicine to the patient until he can see the physician, and in doing so he should avoid committing the latter, by agreeing to send the medicine when it is ready.

2d. The apothecary is justified in the same means of delay, if he, after deliberate consideration, believes that the physician has inadvertently made a mistake in the quantity or dose of the article or articles prescribed; always keeping in view the physician's reputation as well as his own. Every respectful application, in such cases, to a physician, should be met in good faith and with kind feeling, even though no error should prove to exist.

3d. In his demeanor and language, the apothecary should cautiously avoid compromising the physician, unless it be unavoidable, in which case honesty is the best policy, and the patient or his messenger should be told that it will be necessary to have an interview with the physician previously to compounding his prescription.

4th. The apothecary is not justifiable in making inquiries relative to the patient or his disease, or remarks relative to the character or properties of the medicines prescribed, that are uncalled for, or likely to convey a wrong impression, through an ignorant messenger, to the patient, excepting it be done in a case where he has doubts in regard to the pre-

scription, and wishes to satisfy himself, and here he should act with great discretion.

5th. When an apothecary is asked his opinion of a physician's prescription in a manner that indicates want of faith in the prescriber, he should waive the question, unless by a direct answer he should be able to restore that confidence. When asked the nature of the ingredients, he should be guided in his answer by circumstances, avoiding to give the desired information when he believes it would be contrary to the wish of the physician, or attended with injurious consequences. In other cases he should use his own judgment.

6th. Physicians being often unacquainted with practical pharmacy, pay little attention to the order in which the several articles entering into a prescription are arranged, with a view to facilitate the operations of dispensing. It hence becomes the first duty of the apothecary carefully to read the prescription and fix the proper order in his mind. He should, at the same time, acquire the habit of considering the quantities ordered in relation to the usual doses, and also the general bearing of the prescription; and a constant resort to this practice, based on due knowledge, must almost inevitably detect mistakes, if any have been made.

7th. Apothecaries should accustom their assistants to study prescriptions in this light, and to acquire such a knowledge of the doses and therapeutical uses of medicines as shall serve to guide them in avoiding errors.

8th. The apothecary, when engaged in dispensing a prescription, should, as far as possible, avoid mental pre-occupation, and give his attention fully to his task. He should acquire the habit of *always* examining the label of the bottle before using its contents, and he should satisfy himself that he has read the prescribed quantity correctly, by referring to the prescription anew before weighing out each article. It is also a useful precaution to have bottles containing mineral or vegetable poisons, distinguished by some prominent mark.

9th. As the conscientious discharge of his duty should be the aim of every apothecary, seeing that on his correct action depends, in no slight degree, the usefulness of the physician, no pains should be spared to secure the efficiency of the medicines dispensed, whether they be drugs or preparations. The latter should always be prepared of full strength, and according to the formulæ recognized by the United States Pharmacopœia, unless when otherwise specially ordered.

10th. The apothecary should always label, and number correctly, all medicine dispensed by him on the prescription of a physician; he should, also, invariably transcribe on the label, in a plain legible hand-writing, the name of the patient, the date of the prescription, the directions intended for the patient, and the name or the initials of the prescriber.

11th. The original prescription should always be retained by the apothecary, whose warrantee it is, in case of error on the part of the prescriber. When a copy is requested, if, as in many instances, no objection can be urged, it should be a *fac-simile* in language and symbols, and not a translation.

12th. In no instance is an apothecary justifiable in leaving his business

in charge of boys, or incompetent assistants—or in allowing such to compound prescriptions, excepting under his immediate and careful supervision.

13th. In justice to his sense of the proper limits of his vocation, to the medical profession, and to his customers, the apothecary should abstain from prescribing for diseases, excepting in those emergencies, which occasionally occur, demanding immediate action, or, in those everyday, unimportant cases, where to refuse council would be construed as a confession of ignorance, calculated to injure the reputation of the apothecary, and would be attended with no advantage to either physician or patient.

14th. The sale of quack or secret medicines, properly so called, constitutes a considerable item in the business of some apothecaries. Many of the people are favorably impressed towards that class of medicines, and naturally go to their apothecaries for them. It is this which has caused many apothecaries to keep certain of these nostrums, who are ready and willing to relinquish the traffic in them, but for the offence that a refusal to supply them to their customers, would create. At present all that the best disposed apothecary can be expected to do, is to refrain from the manufacture, himself, of quack and secret medicines; to abstain from recommending them, either verbally, or by exhibiting showbills, announcing them for sale, in his shop or windows; and to discourage their use, when appealed to.

15th. Having in view the welfare of the community and the advancement of pharmaceutic science and interest, it is all-important that the offices of prescribing and compounding medicines should be kept distinct, in this city aud surrounding districts. All connection with, or moneyed interest in apothecary stores, on the part of physicians, should, therefore, be discountenanced. With respect to the pecuniary understanding said to exist in some instances, between apothecaries and physicians, we hold, that no well-disposed apothecary or physician would be a party to such a contract, and consider the code of ethics of the College of Pharmacy and the constitution of the Philadelphia County Medical Society as sufficiently explict on this subject.

16th. In reference to the patronage, on the part of physicians, of particular apothecaries, we are of the opinion, as a general rule, that graduates in pharmacy should be encouraged in preference to others of the same date of business; and whilst admitting the abstract right of the physician to send his prescription where he pleases, we think that justice should dictate the propriety of his encouraging the nearest apothecary deserving of his confidence and that of the patient.

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Wm. Maybury,
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American Journal of Pharmacy.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JANUARY 14, 1852.

Respiration and Circulation.—Last week we presented an interesting correspondence respecting Mrs. Willard's theory of respiration, and this week our readers are offered some remarks on the practical application of the same, by Dr. Cartwright, of N. Orleans. These have taken their place in the Journal, in the ordinary course, without any affirmation or denial from us of the theory in question. We shall endeavor hereafter to give the results of our own conclusions, based more particularly on a duedecimo volume by Mrs. Willard, that has been on the table several weeks. It is within the compass of probability that a new discovery has been made; and it is equally possible that an exploded theory has been revived, or that old facts, marshalled in a new order, appear better than in their former loose and disjointed state.

Deteriorated Chloroform.—A complaint, well founded, is loudly proclaimed, that the chloroform, or rather chloric ether, now generally manufactured, is inferior in quality. In short, much of it cannot be trusted to in operations. When the ether mania first commenced, and sulphuric ether was the only article in use, the surgeon could calculate upon its activity; but after a more agreeable agent was produced, which in a measure superseded ether, the demand became so enormous, that little cheats began to be detected, and from small beginnings, great adulterations are spoken of as a matter of notoriety. From Dr. Hayes, the celebrated analytical chemist, a paper has been received that will expose the imposition, and show how the inferior kinds are produced, and why they are tolerated in the drug market. Surgeons should be particularly on their guard, for great injury may be inflicted by the inhalation of chloric ether of bad quality—while rarely, if ever, are patients unfavorably affected by it if pure, and made according to a standard process.

Cause of Dr. J. K. Rodgers's Death.—A pamphlet, addressed to the profession, has been written by Alex. E. Hosack, M.D., of N. York, detailing a history of the disease of which the late distinguished and lamented John Kearney Rodgers, M.D., of New York, died. If the controversy that has been commenced, would restore to life again the subject of a misunderstanding between some medical practitioners of New York, it would be worth while to continue it. Dr. Rodgers is dead, and now a grave question is agitated, of what disease did he die? Dr. Hosack, to our view, has given a plain, truthful narrative of the case, which would satisfy any reasonable man; but probably, in New York, as every where else, there are those who are never happy till they have made some body else quite miserable. One of the effectual methods of making trouble among gentlemen of professional eminence, is either directly or indirectly to accuse somebody of ignorance, or unfitness for professional responsibilities. Dr. Hosack, we think, has been disturbed very unnecessarily by this mode of attack. From all that we can gather in reading the pamphlet, there is no evidence that there is any higher attainments of science in one party than in the other; nor is it at all probable that Dr. Rodgers would have reco-

vered under the medications of those sage critics, who have it in their power to do more mischief with their reports than good with their prescriptions. Confidence in the medical profession is sufficiently shaken, to make it incumbent on all well wishers to the respectability of the craft, to uphold each other, by counsel and kind offices, instead of vilifying and underrating the qualifications of their neighbors. We care not who may dislike the freedom of these remarks, since we are conscious of being in the right, and shall avoid no opportunity of rebuking those who deviate from that high standard which contemplates the peace and prosperity of their brethren in the same responsible pursuits.

Corslets, Supporters and Spinal Apparatus.—A medical gentleman of Boston has given notice that he is about declaring hostility against all kinds of contrivances for staying up weak backs, relaxed abdominal muscles, falling of the womb, &c. He is convinced that they never were worth a farthing, and to show that he is in earnest, he signifies his intention of coming out with a treatise to put the public on their guard against any of the mechanical contrivances now in common use. Public opinion has been greatly misled if all the ingenious mechanical aids that have received the commendations of surgeons, as well as sufferers, are thus worthless. If we have all been deceived, and instead of aiding and assisting nature, they have defeated her intentions, the sooner the fact is ascertained the better for all concerned—except the instrument makers.

Preservation of the Teeth.—Notwithstanding the multiplication of dental operators, bad teeth are very numerous, and the refinements of civilization increases, instead of diminishing, the diseases of those organs. Books, too, abounding in directions for keeping them in a healthful condition, are quite plenty; but the more numerous truly scientific manuals are, from responsible sources, the better. John Clough, M.D., of Boston, who ranks high as a dental operator, has issued a small treatise, more especially for the use of his patients, that evinces thought, learning and sound discretion. Dr. C. possesses the happy faculty of conveying instruction in a few words. A gentleman may carry in his vest pocket Dr. Clough's treatise, and reap as much benefit from it as from some quarto volumes. The book, in our day, that has much in a little space, is the book to be read and remembered, and consequently this will be received not only as a pleasant and agreeable, but a valuable monitor. Dr. Clough gives his sanction to soaps, if we do not misapprehend him, above all other preparations for cleaning the teeth. There certainly can be no misunderstanding in regard to the following extract. "Microscopical examinations showthat the teeth of nearly every person are infected with numerous animal and vegetable parasites, which cannot be destroyed or removed by the use of ordinary tooth powders and washes. These conclusions are based upon the examination of the matter deposited upon the teeth and gums of more than forty individuals, selected from all classes of society, and in every variety of bodily condition; and in nearly every case, animal and vegetable parasites were discovered in great numbers." The author shows that persons who habitually brushed their teeth with soap, morning and evening, were free from parasites, the undoubted cause of diseased conditions of the gums and denudation of the teeth. Mr. Davis has come before the public in a favorable moment with his saponaceous dentifrice, and the community will be as great gainers as the inventor.

Radical Cure of Reducible Hernia.—An interesting correspondence has appeared in the papers of Boston between the committee on hernia of the American Medical Association, and Dr. George Heaton, of this city, which discloses that gentleman's intention of publishing a volume. For several years past Dr. Heaton has been engaged extensively in the surgical treatment of hernia, and with a degree of success that indicates that there is some improvement at his disposal, superior to the ordinary processes. The application therefore by the committee has very properly been made to him, and we regret that his answer to the question, how a radical cure is brought about, will not be contained in their report. Dr. Heaton, on reflection, concludes to answer the respectful inquiry through a work distinctly appropriated to the subject, illustrated by a large collection of cases. When published, a more particular notice of it, and of his mode of operating, will be given.

Obstetric Report.—Some extra copies of the interesting report of the Committee on Obstetrics, to the American Medical Association, in May last, have been worked off. The pamphlet is neatly printed, and is presented in a convenient form for those who may not have access to the large volume which embraces the entire transactions of that learned body for 1851.

Mortality for 1851.—In Salem, Ms., the number of deaths last year was 427, including 28 in the Almshouse. Of those out of the Almshouse, 200 were males and 199 females. Eighty were under 1 year, 120 between 1 and 10, and 4 over 90. One hundred and eleven were foreigners and children of foreigners.

In Marblehead, Ms., among the deaths last year the remarkable circumstance occurred of an equality in the sexes—viz. 50 males and 50 females. Forty were under 10 years, and 30 over 70 years.

In Topsfield, Ms., the whole number of deaths was 33—21 females and 12 males. Seventeen were over 50 years of age, and 8 over 70. Only 8 were under 5, and none between 5 and 20.

The whole number of deaths in the town of Essex, Ms., last year, was 45, more than ever occurred there before since the incorporation of the town.

Health of the Season at the West.—The health of the past season has been generally good in the West. Doctors' purses have been growing lean, while Hygeia, the goddess of Health, appears to have been liberally dispensing her blessings. In some portions of the West, it is true, cholera, that dread scourge of the human family, made its appearance; and in others, dysenteric affections have prevailed, and proved difficult to manage, if not taken seasonably. But fever and ague, two of the most prominent features of malarious influence, has, for some cause, been scarcely heard of the past season. The fact is, that our malarious fevers appear to be every year diminishing in the West, and others of a continued character taking their place.—*Western Med. Chirur.* (*Keokuk, Iowa*) *Journal.*

Kentucky State Medical Society.—The transactions of the first annual meeting of this society have been received. It appears that a convention of the physicians of Kentucky was held at Frankfort, on the first of October; a committee was appointed to draft a constitution for a State Society,

which was reported and adopted. An election was then held for officers of the society, whereupon the convention adjourned *sine die;* and the State Medical Society commenced its first annual meeting. Dr. W. L. Sutton, of Georgetown, was chosen President, an honor of which he is abundantly worthy. Thus, we have another medical organization which promises much good to the profession, and may also be considered as resulting from the organization of the American Medical Association. The code of ethics of the American Medical Association was adopted as the code of the society.—*Western Lancet.*

Medical Miscellany.—A school girl at Alstead, N. H., 17 years of age, is said to weigh 450 pounds.—Messrs. Stringer & Townsend, of New York, publishers, direct the attention of the medical profession to the prospectus of Braithwaite's Retrospect. It is so very cheap that every student may have it.—Dr. H. A. Ramsay is calling upon the members of the American Medical Association touching the old quarrel with Dr. Robertson. According to the circular, the misunderstanding is not made up; it is still an open wound, to be probed as each has leisure or inclination.—Preparations are making for asking of the Legislature the grant of a sum of money for the Female Medical College of Boston.—In the case of Amherst College, it was understood that if a charter were given, which was procured by a mighty exertion, the institution should never ask or expect pecuniary assistance of the Commonwealth. A few years after, the college obtained $25,000!—Varioloid has appeared at Westerly, R. I. —In Greenfield, Mass. in 1851, 36 persons died.—C. D Griswold, M.D., has published, in a pamphlet, a chapter on the climate of Panama, and its effects on health.—Several publications have been proposed, which may soon be expected from the Philadelphia and New York press.—In regard to the inquiry, what is thought of the republication of Ricord, we would say that we have had no means of ascertaining the public sentiment in regard to the work.—The Washington, D. C., Report of the Board of Health has been received. Its accuracy, and suggestions in regard to measures for the preservation of the public health, are admirable.—There are 7957 physicians in Russia, having a right to practice.—Parliament has given $650,000 to purchase a new cemetery in the neighborhood of London.—The medical profession is becoming very much reduced in Paris. There have been too many, in past times, for the success of the whole.—A new Journal is about to be issued in New York, under the auspices of the New York College of Pharmacy, to be edited by Dr. Benj. W. M'Cready, Prof. of Materia Medica and Pharmacy in that institution.—The number of deaths in Boston, last week, was 20 less than the weekly average for January the two previous years.

DIED,—In Townsend, Mass., Dr. Henry A. Gerry, 32.—In Sherburne, Mass., Oliver Everett, M.D., 53.—At Newbury, Mass. Dr. Marsh J. Lyman, 35.

Deaths in Boston—for the week ending Saturday noon, Jan. 10th, 49.—Males, 24—females, 25. Accidental, 1—disease of bowels, 1—inflammation of bowels, 1—disease of brain, 1—burn, 1—consumption, 4—convulsions, 3—croup, 4—dyspepsia, 1—dropsy, 1—dropsy of the brain, 3—typhus fever, 2—typhoid fever, 1—scarlet fever, 2—hooping cough, 2—disease of heart, 2—intemperance, 1—infantile, 3—inflammation of the lungs, 6—marasmus, 1—old age, 1—palsy, 1—puerperal, 1—smallpox, 1—teething, 3—unknown, 1.

Under 5 years, 26—between 5 and 20 years, 2—between 20 and 40 years, 9—between 40 and 60 years, 5—over 60 years, 7. Americans, 18; foreigners and children of foreigners, 31. The above includes 3 deaths at the City Institutions.

Simple Method of Preserving Extracts of Vegetable Juices.—By M. Stanislas Martin.—The author had previously recommended to naturalists, who wished to preserve the juices of plants, to concentrate the watery part rapidly by mixing them with sand or powdered glass, and thus exposing a large surface to the air. This proceeding suggested another, which is more simple, more expeditious, and more portable for a traveller.

It consists in bruising the plant, expressing the juice, soaking in it fabrics of linen hemp or cotton, and then drying them by exposure to the air.

As soon as the cloth dries it is to be moistened again with the juice, and again hung up to dry, and this is repeated till the cloth becomes somewhat hard. He has found that a square metre (1 yard 3 inches) can imbibe a kilogramme (2 lbs. 8 oz Troy) of active matter, which is more than sufficient for a chemical analysis.

Cloths, covered with vegetable extract, are generally hygrometric,—it is therefore proper to preserve them in bottles or boxes, which are air-tight. —*Bulletin de Thérapeutique*, 15th September, 1851.

On Scutellaria Lateriflora in Tic Douloureux.—By William Stabler, of Alexandria, Virginia.—About 25 years ago my wife had quite a severe attack of tic douloureux on one side of her face, and as the scullcap had been a good deal spoken of as a remedy for hydrophobia, I determined to try it in this case, supposing its influence to be exerted on the nervous system. By the use of two or three pints of infusion, made with an ounce of the herb to a pint of boiling water and taken in doses of a wine-glassful three or four times a day, the disease appeared to be entirely relieved: in the course of a week or ten days, however, it returned, when the scullcap infusion was again resorted to, and continued several weeks, after which there was no return of the disease on that side. A few years after this period, my patient was attacked on the other side of her face, but the diligent use of the scutellaria, as before, soon relieved her, and she has, ever since, remained free from that painful disease.

I have advised this remedy in other cases of tic douloureux, and it has had equal success in some, while in others it has failed. I have also given it in cases of tremor, from the abuse of alcoholic drink, with happy effect, and in one case of great depression of spirits produced by dyspepsia. As to the after effect of this nervine, my observation corresponds with that of Dr. Cleaveland.—*American Journal of Pharmacy.*

A New Method of preparing Powders for Use in Medicine.—Wittke, of Erfurt, recommends a new and very useful form of powder. Tinctures, as is well known, generally possess the most active properties of the drugs from which they are prepared, but the amount of spirit they contain often renders their employment inadvisable. Wittke, therefore, mixes tincture of hellebore, of cinchona, &c., with an equal quantity of sugar, evaporates to dryness, and powders the residuum. In this manner, he succeeds in concentrating, in a very small bulk, the active portion of a very large quantity of the drug, and he prescribes the powder as saccharized cinchona, &c. These preparations bear some analogy to conserves, over which, however, they have a great advantage, in being free from mucilage, vegetable albumen, and other inert matters.—*Vierteljahrschrift für die praktische Heilkunde*, 1851. *Band*, 3 *Analekton*, *S.* 14.